CITY OF SAN ANTONIO
METROPOLITAN HEALTH DISTRICT

COVID-19 Monthly Epidemiological Report
Released 10/12/2020

*Unless otherwise indicated, all analyses conducted for this report are based on data within the Bexar County case management system **up to 10/4/2020**.*

I. Current Status and Overview of COVID-19 in Bexar County

Six months into the COVID-19 Pandemic, Bexar County has experienced nearly 60,000 COVID-19 cases and 1,200 deaths attributed to COVID-19. While Bexar County experienced a major surge in cases in June and July, it moved out of exponential transmission starting in August, and in the last couple of months it has seen a more steady and moderate phase of the pandemic. Bexar County's current COVID-19 risk level is: **Low.**

Key Takeaways from this Report

Cases

- 97% of cases at this point are estimated to be recovered. Approximately 18% of cases to date are indicated as having been asymptomatic at the time they were investigated.
- Those in their 20s consistently account for 1/5th of total cases to date, as well as 1/5th of cases that occurred in September. Pediatrics (<18 years old) accounted for 15.5% of cases occurring in September.
- Approximately 1,300 cases to date have indicated being a healthcare worker, and approximately 150 have indicated being a first responder. 110 cases to date have been school-related, with students and staff equally affected.

Hospitalizations, Deaths, and Underlying conditions

- Approximately 3,500 hospitalizations (6% of cases) due to COVID-19 have occurred up to now. 1 in 5 individuals hospitalized have been between 18-40 years of age.
- Among pediatric cases, Hispanic/Latinos are disproportionately hospitalized compared to their respective proportion in the population.
- Zip codes in central Bexar County have the highest proportion of cases hospitalized.
- Approximately 70% of those hospitalized as well as 70% of those deceased had some type of underlying condition. Diabetes continues to account for the overwhelming majority of underlying conditions affecting cases.
- 35% of hospitalized pediatrics have an underlying condition documented, with asthma being the most common one.
- 1 in 5 cases hospitalized due to COVID-19 have passed away.

Risk of hospitalization and death

- Males have a higher risk of hospitalization and death compared to females.
- The risk of hospitalization among the subgroup of cases with diabetes is 5 times higher than the risk of hospitalization among all cases overall.

II. Reporting Frequency and Data Resources Available

The Metro Health COVID-19 data reporting structure is as follows:

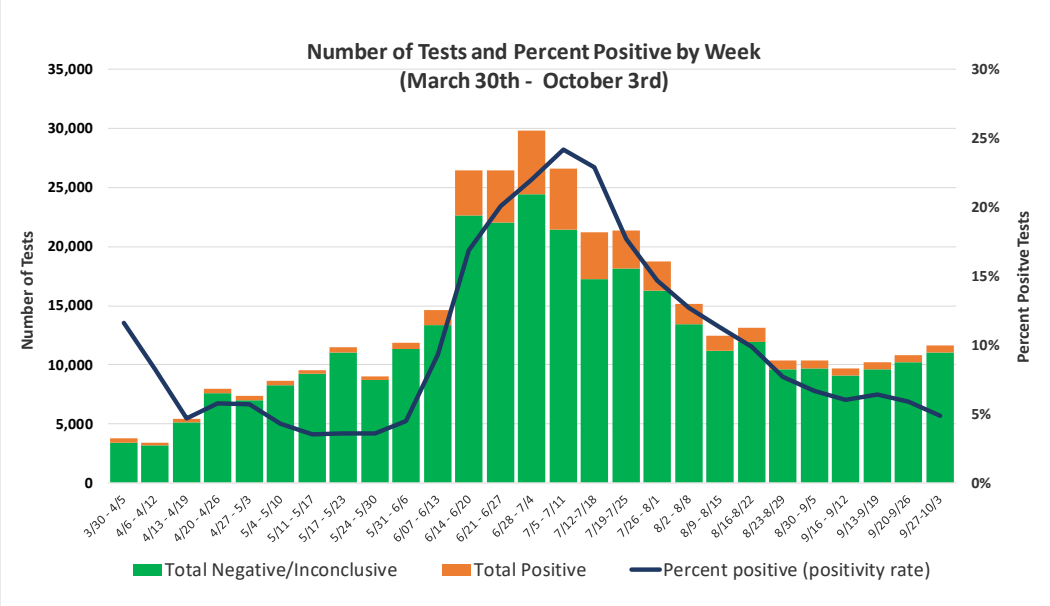
- New cases (defined as specimen date in last 14 days), deaths, and hospitalizations reported daily.
- Bexar County progress and warning indicators updated and reported weekly, on Mondays.
- A comprehensive epidemiological report on COVID-19 cases is distributed the 2nd week of every month.

For the most up-to-date COVID-19 data for Bexar County, visit the following resources:

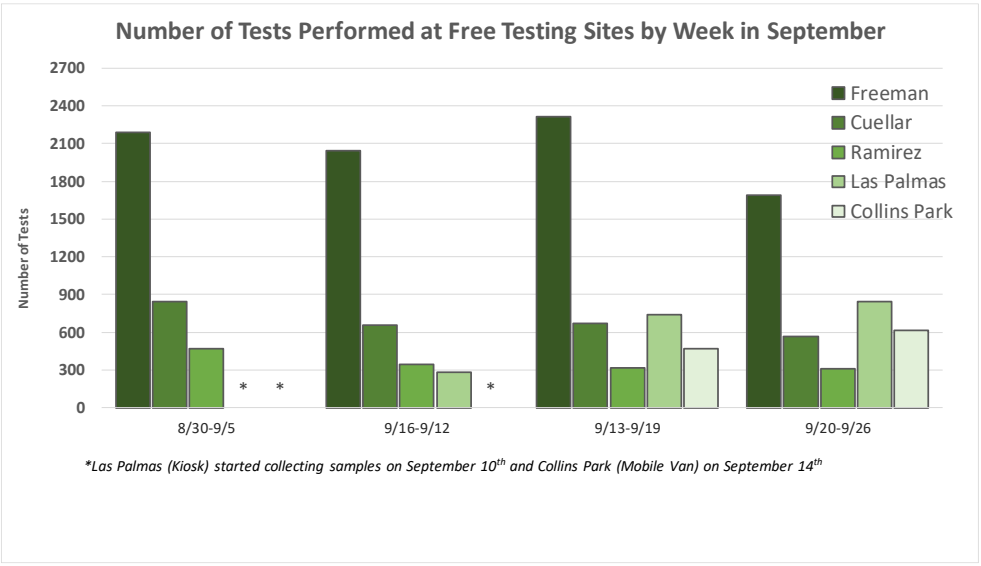
- Surveillance dashboard: https://covid19.sanantonio.gov/About-COVID-19/Dashboards-Data/Surveillance
- Tabular data: https://covid19.sanantonio.gov/About-COVID-19/Case-Numbers-Table-Data
- Progress & Warning Indicators dashboard: https://covid19.sanantonio.gov/About-COVID-19/Dashboards-Data/Progress-Warning-Indicators
- Trends dashboard: https://covid19.sanantonio.gov/About-COVID-19/Dashboards-Data/Bexar-County-Key-Indicators

III. Testing & Positivity Rate

The Bexar county COVID-19 weekly positivity rate began climbing in early June and reached a record high in early July (24.2%), indicating the height of the 2-month surge that we experienced across June and July. Since then the weekly positivity rate has steadily declined, and was below 5% in the last week of September.



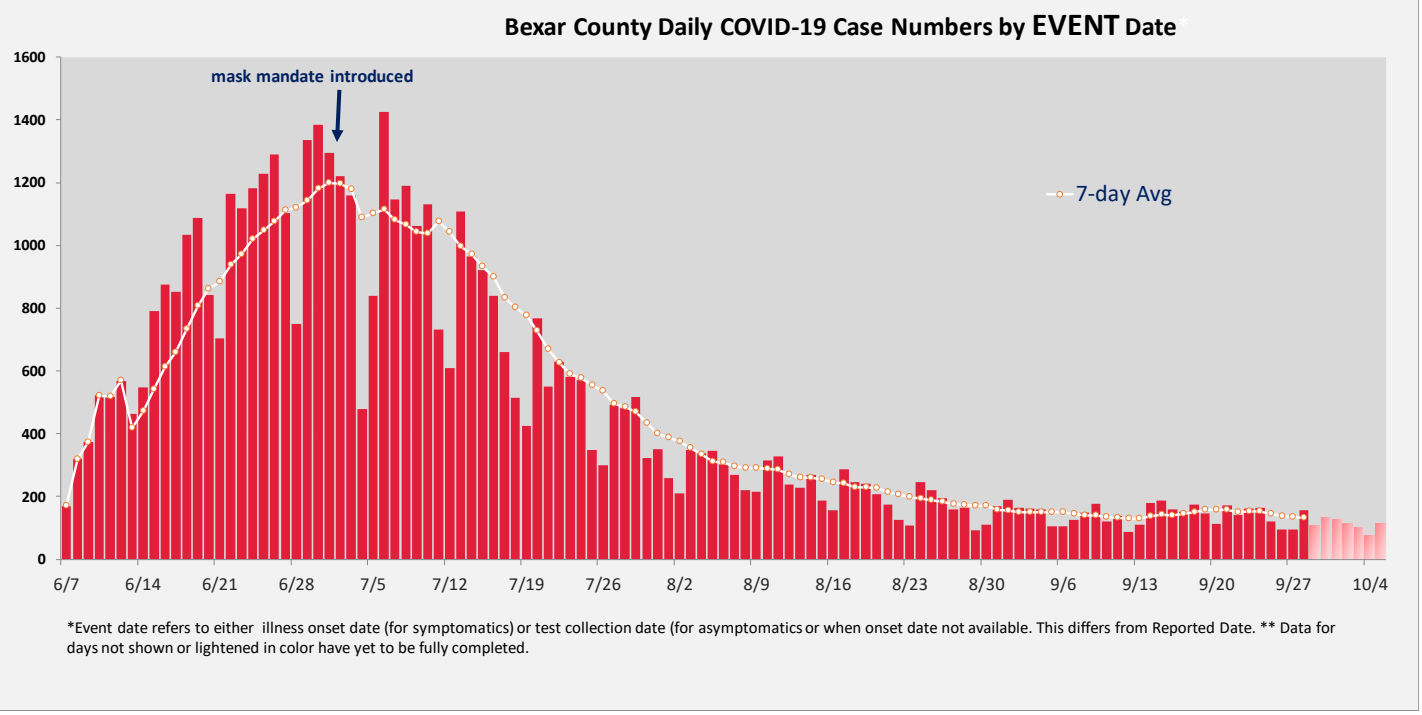
Each week in September, approximately 3,500-4,000 people received a COVID-19 test at a free, City-run testing site. The Las Palmas Kiosk and the Collins Park Mobile Van commenced testing in mid-September, which provided close to 3,000 tests by the end of September.



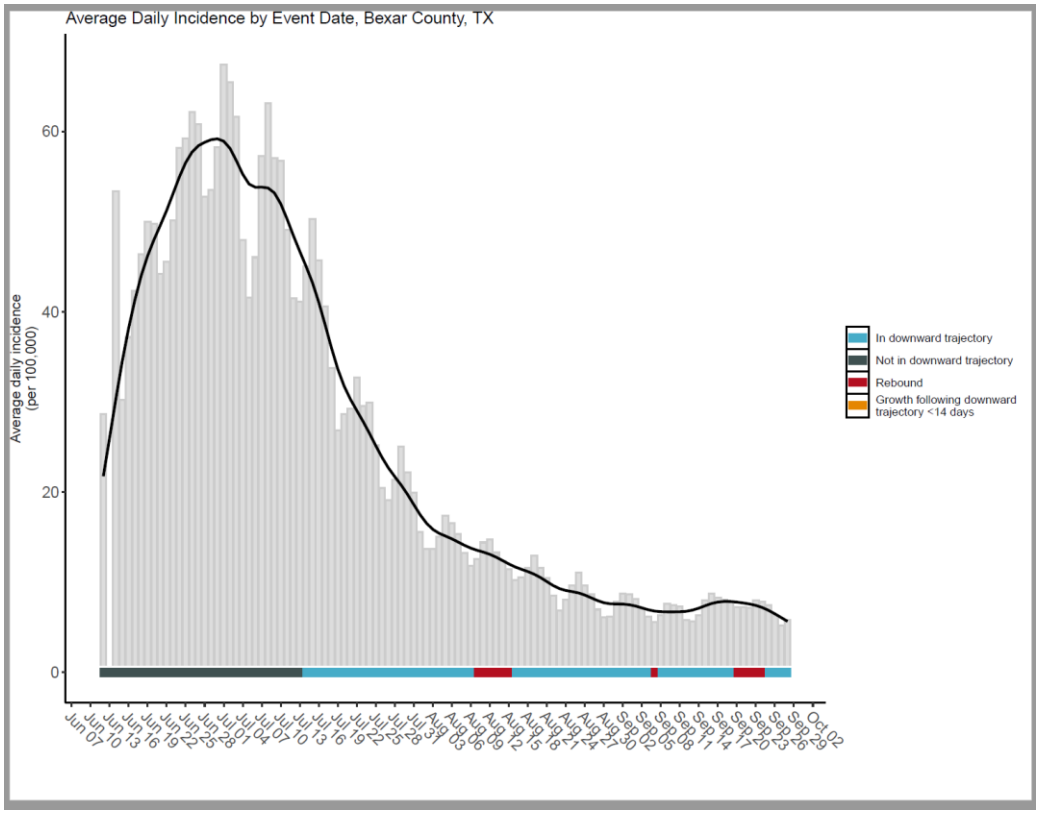
IV. Trends & Demographic Characteristics among COVID-19 Cases

- **97% of total cases to date are now estimated to be recovered at end of September**.
- Among cases which have been investigated, **82% expressed experiencing symptoms due to their COVID-19 infection, while 18% are indicated as having no symptoms** at the time of the case investigation.
- When examining symptom status by age, 30% of pediatrics, 16% of those 18-40 years old, 14% of those 41-64 years old, and 20% of those 65+ are indicated as having no symptoms.
- Among **pregnant women** who were contacted and investigated, **23% are indicated as having no symptoms.**

Similar to trends in positivity rate, Bexar County experienced its highest daily cases (according to event date, not reported date) early-mid July, reaching upwards of 1200 new cases/day on some days. **Two-three weeks after the mask mandate was introduced, daily cases fell below 500, and since early August, daily cases have consistently hovered around 200-300 cases each day.**

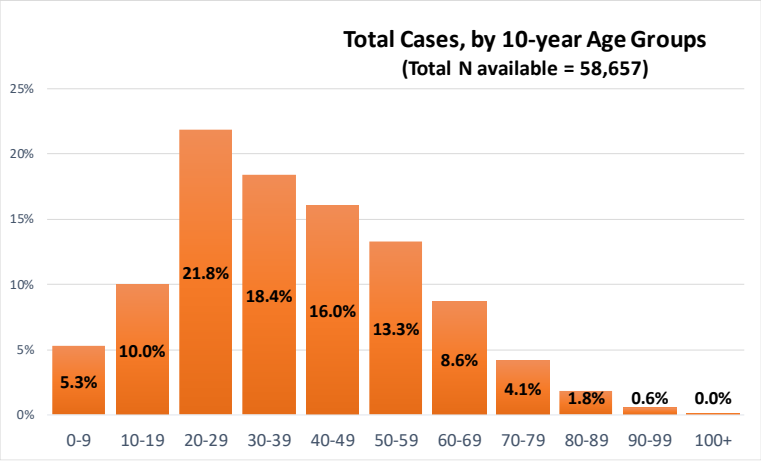


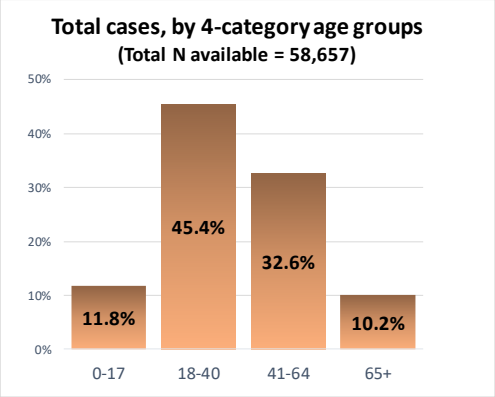
The graphing of daily cases (as an incidence rate per 100,000), using a statistically enhanced method*, identifies the trajectory trends occurring over time. Since August, we have generally been in a downward trajectory, except for two instances of a rebound around mid-August as well we late September.



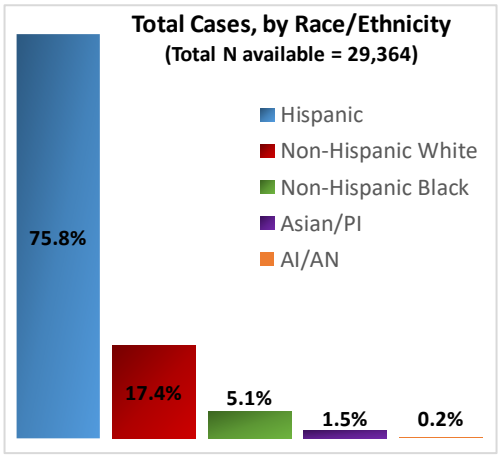
*Method uses a 3-day rolling average in a cubic smoothing spline, as specified by the CDC: https://www.cdc.gov/coronavirus/2019-ncov/downloads/php/CDC-Activities-Initiatives-for-COVID-19-Response.pdf

- The distribution of COVID-19 cases by age-group has remained consistent over the past couple of months. At 21%, **those in their 20s account for the largest proportion of total COVID-19 cases**, meaning that 1 in 5 cases to date have been in their 20s. This trend is also observed when we look only at cases that occurred in September (according to event date): **21% of cases occurring in September were in their 20s**.
- When looking at the age distribution of cases according to a 4-category age breakdown, **pediatrics (<18 years of age) continue to account for approximately 12% of total cases to date**. When looking only at cases that occurred **in September, pediatrics account for 15.5% of cases**.

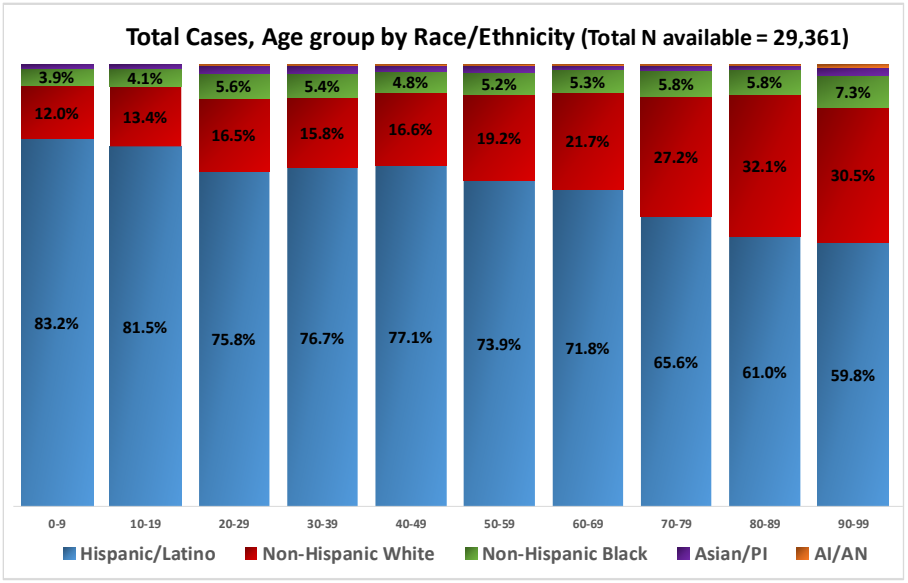




- The distribution of total cases according to race/ethnicity has also remained consistent in the past two months. Among total cases with race/ethnicity data available, **Hispanic/Latinos continue to account for more than three-quarters of cases, despite composing only 60% of the population**.
- Similarly, analyses of age group by race/ethnicity reveal that within each 10-year age group, Hispanic/Latinos account for the largest proportion of cases. In fact, **Hispanic/Latinos make up a higher proportion of cases in each age-group compared to their respective proportion in the Bexar County population**. For example, Hispanic/Latinos account for 77% of cases in the 30-39 age group, however, they only account for 61% of 30-39-year-olds in the Bexar county population. Conversely, NH-Whites make up a smaller proportion of cases in each age group compared to their respective proportion for each age group in the population.



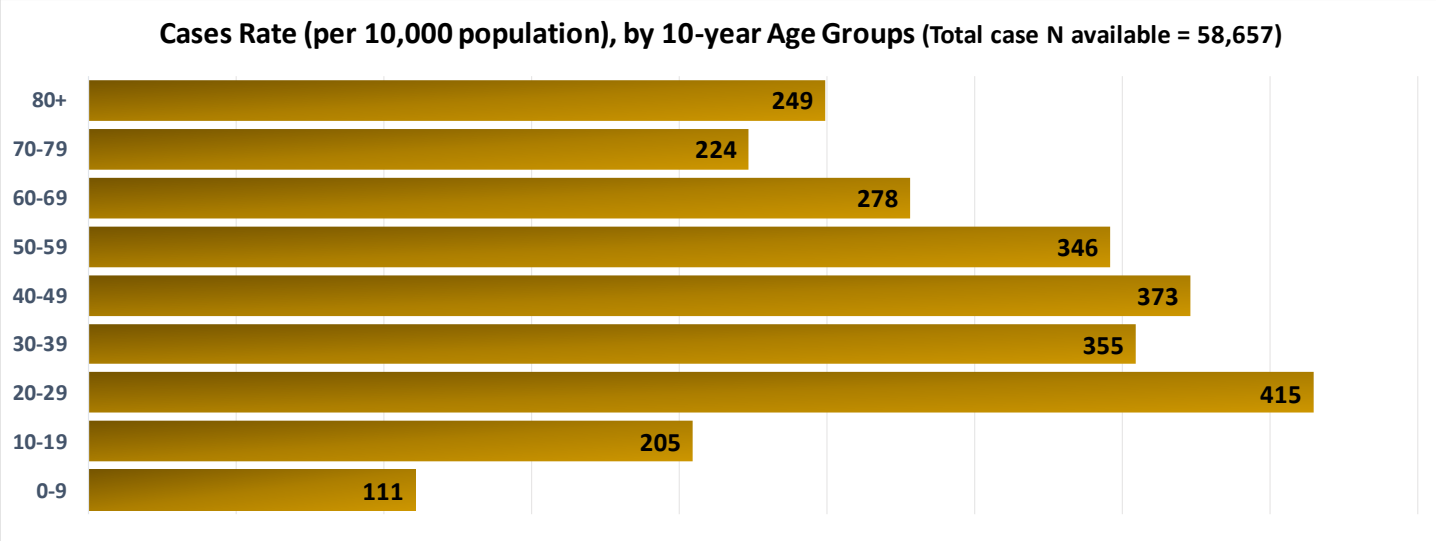
**Note: A large proportion of cases are missing race/ethnicity data, and analyses were conducted on Total N specified in the graphs.*



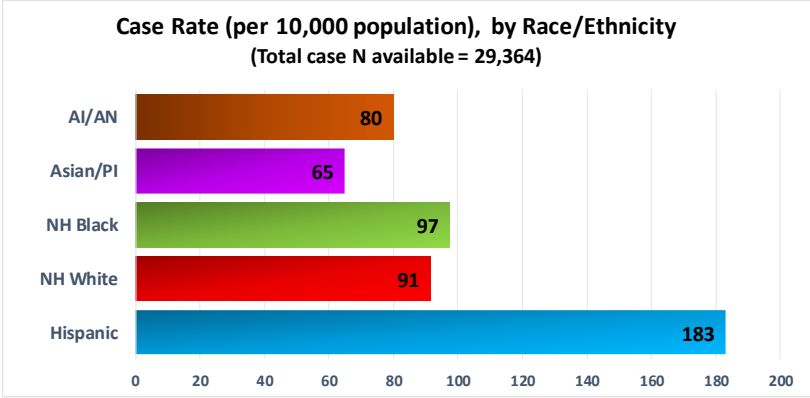
PI = Pacific Islander; AI/AN = American Indian/Alaska Native

V. The Extent of COVID-19 in the Bexar County Population

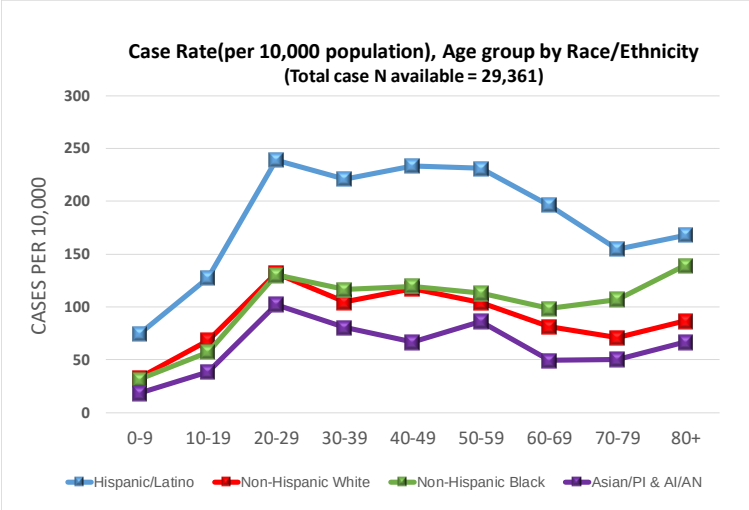
In addition to examining the characteristics among COVID-19 cases, it is also important to examine the extent that COVID-19 has reached in the population. **The cumulative COVID-19 case rate in Bexar County is approximately 293 per 10,000 population**. When examining by age group, the **highest case rate occurs among those in their twenties**: 415 per every 10,000 people aged 20-29 have been infected with COVID-19.



Based on the race/ethnicity data available for cases, **Hispanic/Latinos have the highest case rate** at 183 per 10,000 population, meaning that at least 183 per every 10,000 Hispanic/Latino Bexar County resident has been infected with COVID-19 to date. NH-Blacks have a slightly higher case rate than NH-Whites.

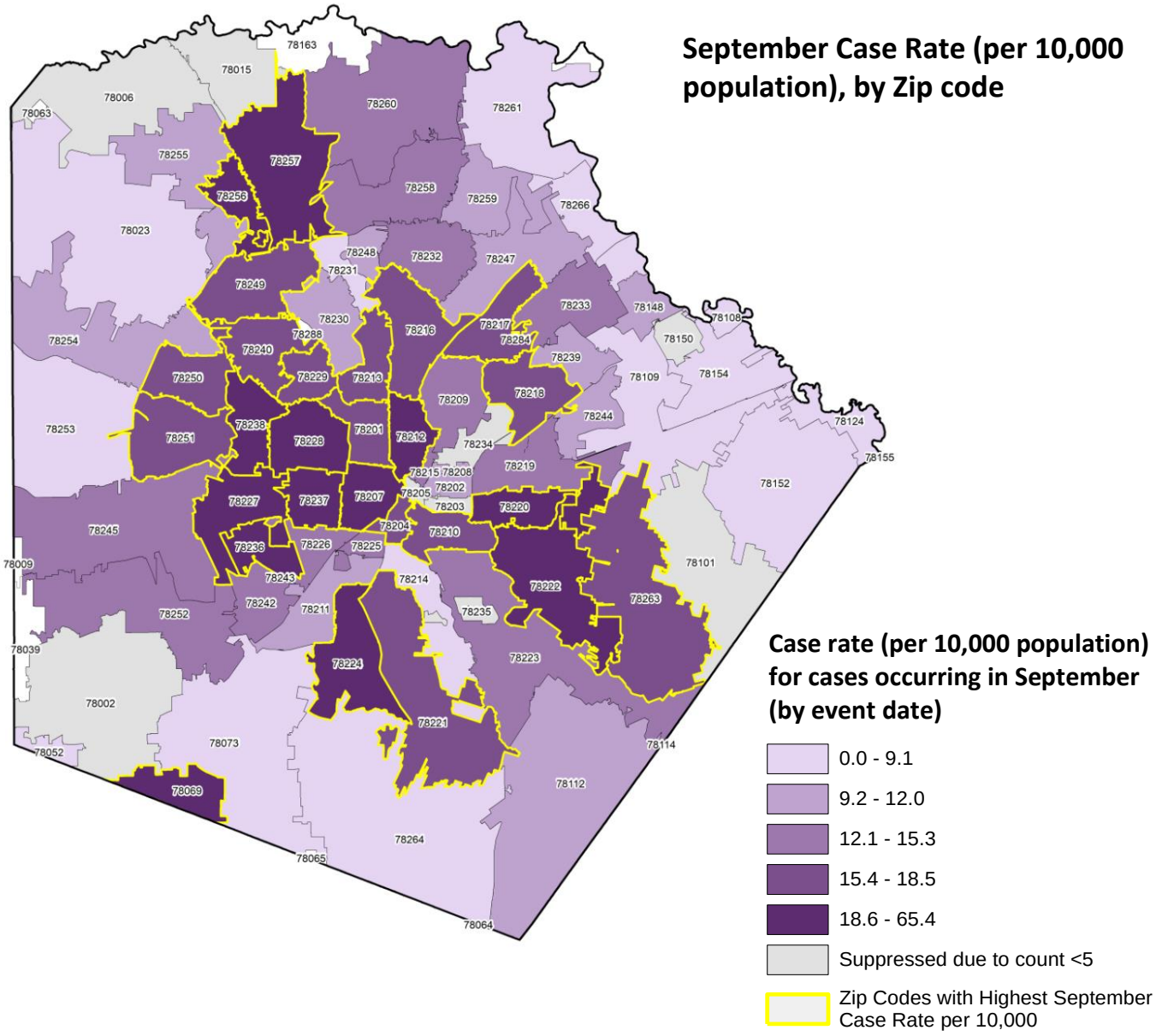


Differences in case rate by race/ethnicity are similarly seen according to age group. Within each 10-year age group, Hispanic/Latinos have the highest case rate. NH-Blacks and NH-Whites have similar case rates within younger age-group categories, however, NH-Blacks have a higher case rate than NH-Whites within the older age-groups: 60-69, 70-79,



*(**note: given the large proportion of cases with missing race/ethnicity data, case rates by race/ethnicity are most likely underestimated to a significant degree).*

Cases occurring in September were mostly concentrated in zip codes within the inner core of Bexar County. The highest case rates were among zip code in central Bexar County (e.g. 78207,78237), as well as a few zip codes in the northwest (e.g. 78256,78257) as well as in the southeast (e.g. 78220, 78222). Case rates by zip code ranged from 0 to 65 per 10,000 population.

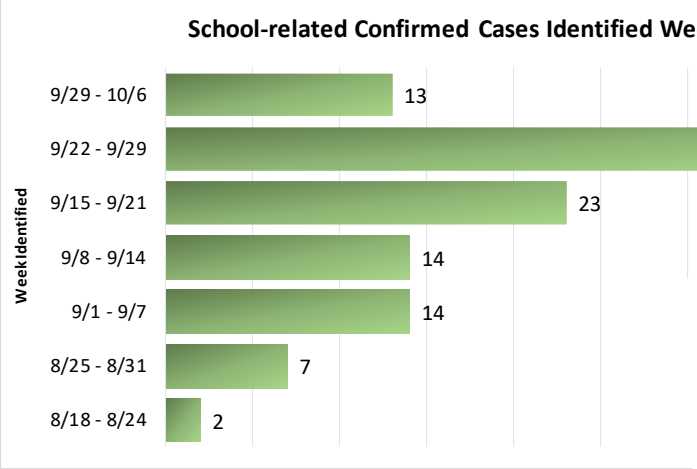


VI. COVID-19 & Occupation

- **Among total cases to date, more than 1,300 are indicated as working in some type of healthcare setting.** Among these healthcare workers, more than 700 (54%) specified nursing as their occupation (e.g. NP, LVN, CN, hospital nurse), while approximately 200 specified their occupation as a physician or physician's assistant.
- Approximately 150 cases to date are indicated as being a first responder or working in an emergency medicine setting (e.g. firefighter, EMT, EMS).

VII. Congregate Setting & School-related Cases

- **Close to 2,000 cases** to date are indicated as having occurred in a **congregate setting** (e.g. residents and staff at long term care facilities, assisted living facilities, rehabilitation facilities, among others), and **close to 400 cases** to date have occurred in a **Jail or detention facility.**
- **Total number of deaths** associated with a **congregate setting** is now **260**. The overwhelming majority of these deaths have occurred in assisted living and nursing facility settings.

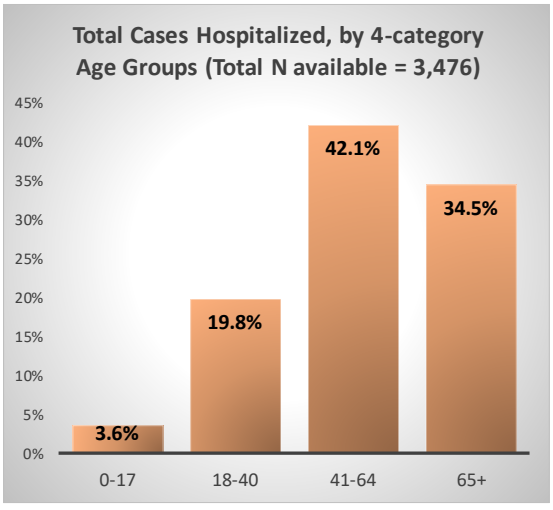


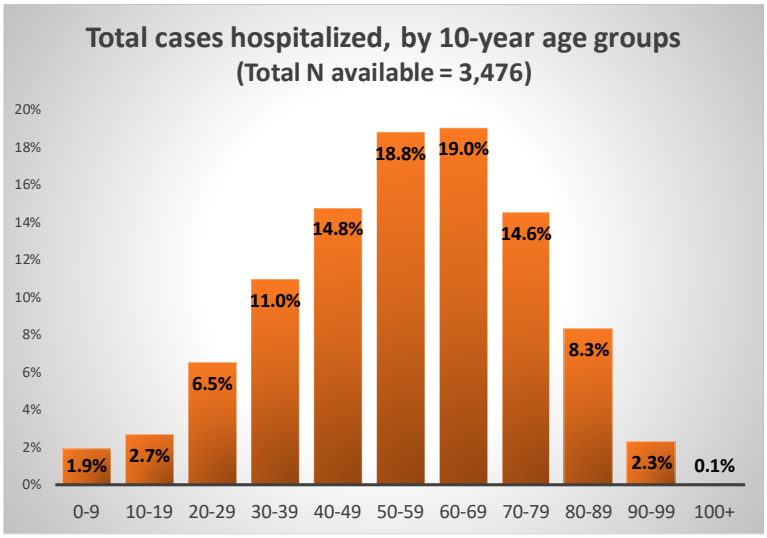
Total number of school-related cases is now **110** (*as of 10/4/2020*). Approximately half are among students and the other half among staff/teachers.

VIII. Hospitalizations, Deaths, and Underlying Conditions Among COVID-19

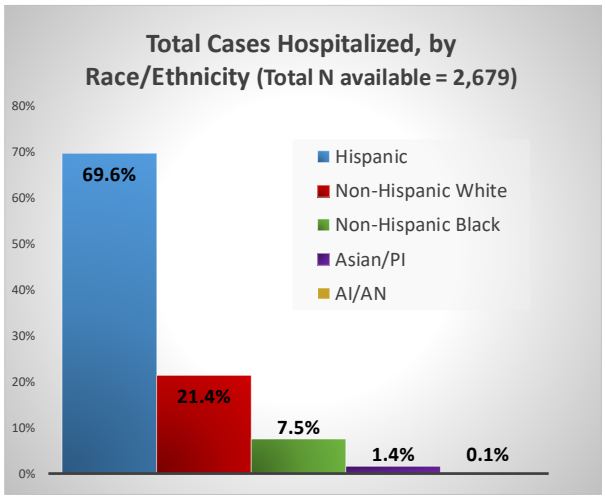
Hospitalizations

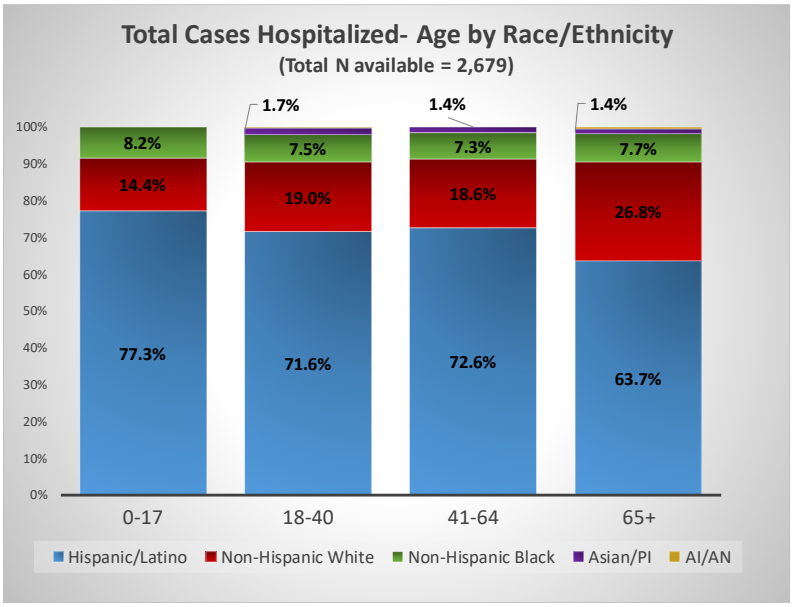
Approximately 3,500 individuals have been hospitalized to date due to COVID-19. Hospitalization trends by age are the same as that reported last month: pediatrics account for 3.7% of cases hospitalized to date, and those between 18-40 account for 20% of cases hospitalized to date. This means that **1 out of every 5 hospitalized cases has been someone between 18-40 years of age**.

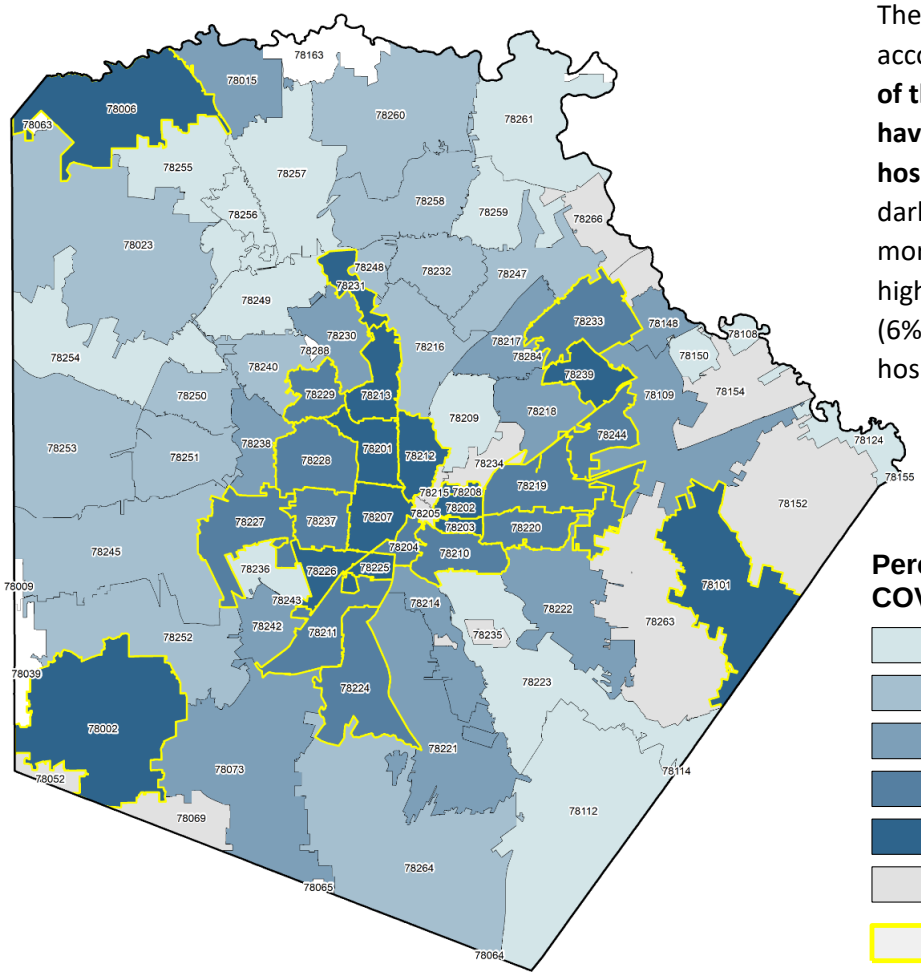




Among pediatric cases, Hispanic/Latinos are disproportionately hospitalized compared to their respective population size in Bexar County. Specifically, 77% of pediatric cases hospitalized have been Hispanic/Latino, while 68% of Pediatrics in the Bexar County population are Hispanic/Latino.







The proportion of cases hospitalized varies according to Bexar County zip code. **Many of the zip codes in central Bexar county have had a higher proportion of cases hospitalized**. The zip codes with the darkest shade of blue have had 7% or more of their cases hospitalized. This is higher than seen for Bexar County overall (6% of all cases in Bexar County have been hospitalized to date).

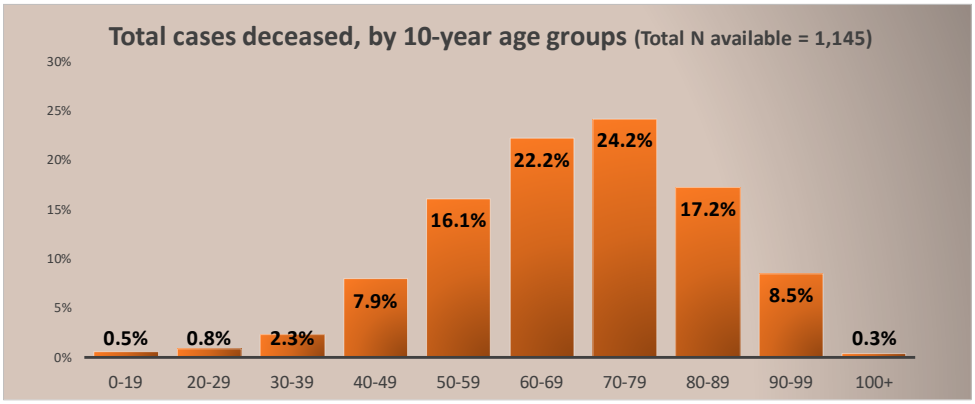
Percent of Bexar County COVID-19 Cases Hospitalized

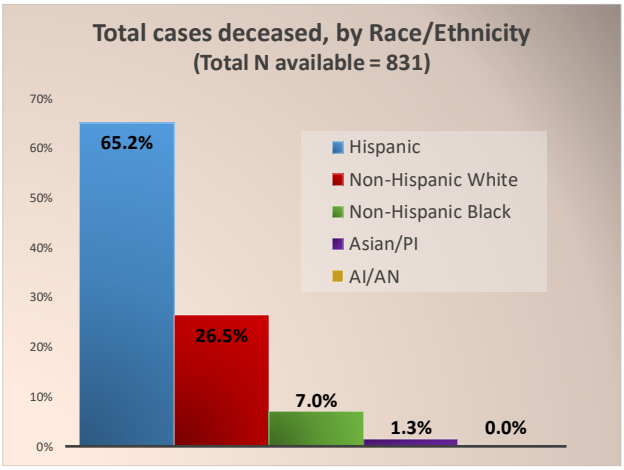
- 0.0% -4.4%
- 4.5% - 5.3%
- 5.4% - 6.2%
- 6.3 - 7.1%
- 7.2 - 11.0%
- Suppressed due to counts <5
- Zip Codes with Highest Percents of COVID-19 Hospitalization

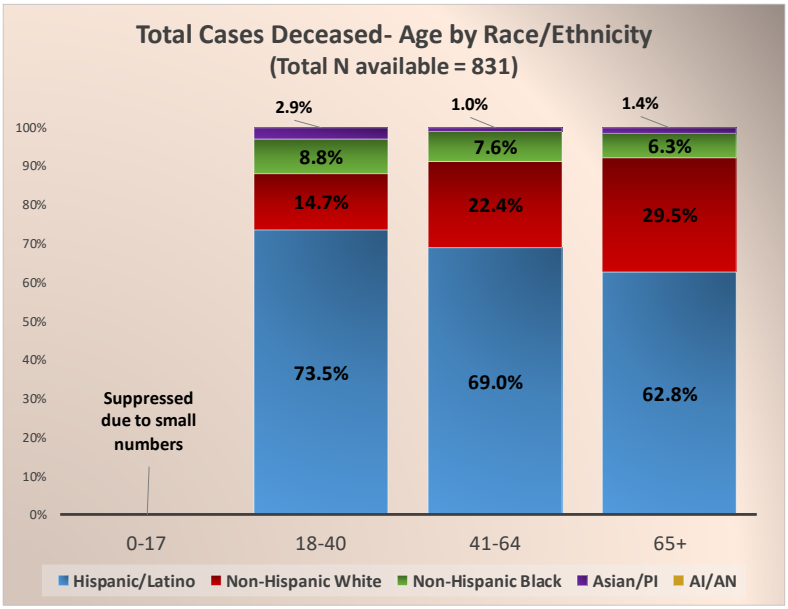
Deaths

The distribution of COVID-19 deceased cases according to 10-year age-groups and race/ethnicity is largely similar to that observed for hospitalizations.

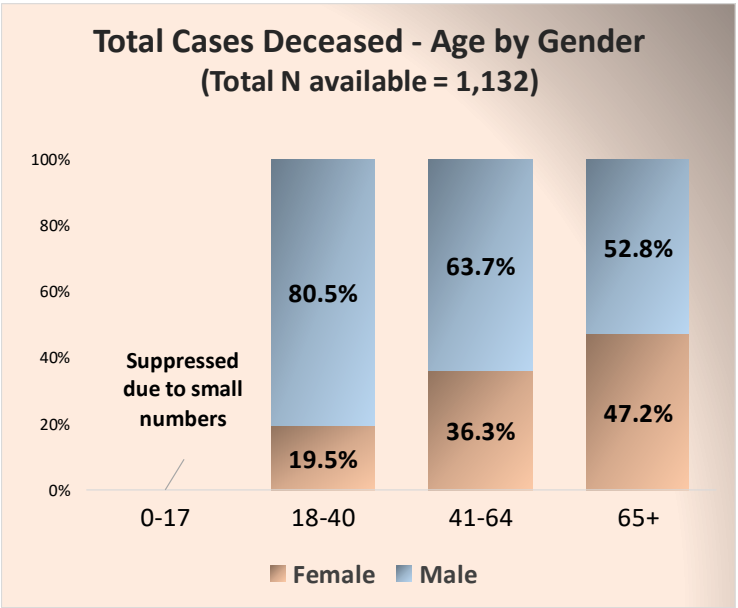
The distribution of deceased cases by race/ethnicity in the 18-40, 41-64, and the 65+ age groups is similar to that observed for hospitalizations.







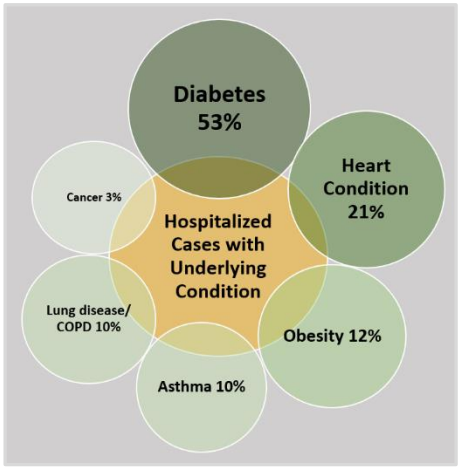
When examining gender by age differences among deceased cases, **males account for a higher proportion of deaths compared to females in each of the three age groups examined** (pediatric age group suppressed due to small numbers).

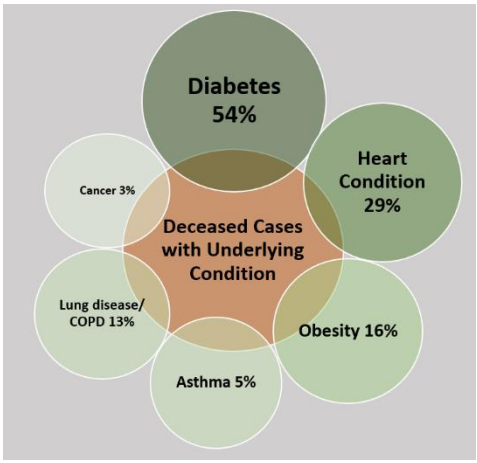


Underlying Conditions

Approximately 70% of total hospitalized cases are indicated to have some type of underlying condition (the other 30% either do not have an underlying condition OR their status is unknown). Among these cases, diabetes is the most common, followed by heart disease and obesity.

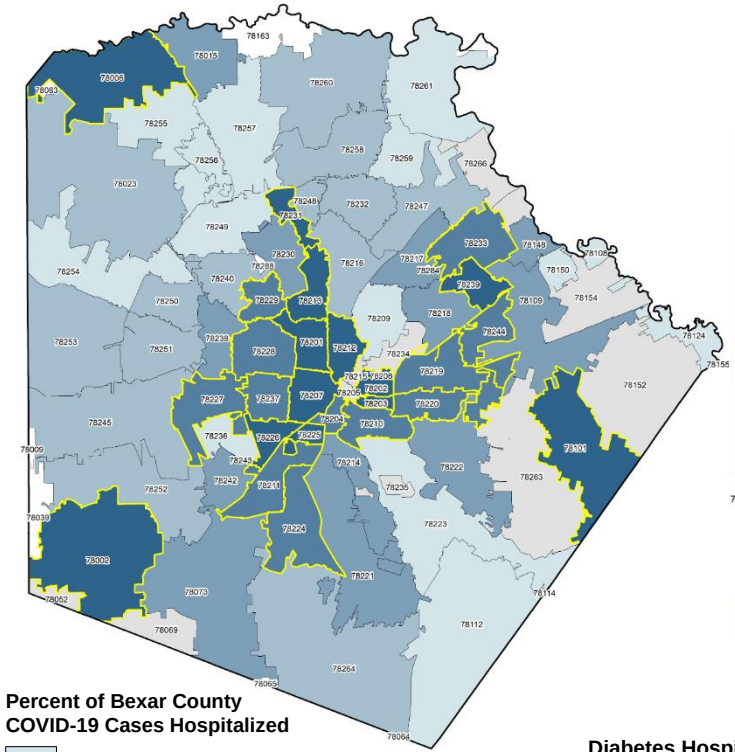
Proportion of underlying conditions among deceased cases is largely similar to that seen for hospitalized cases.





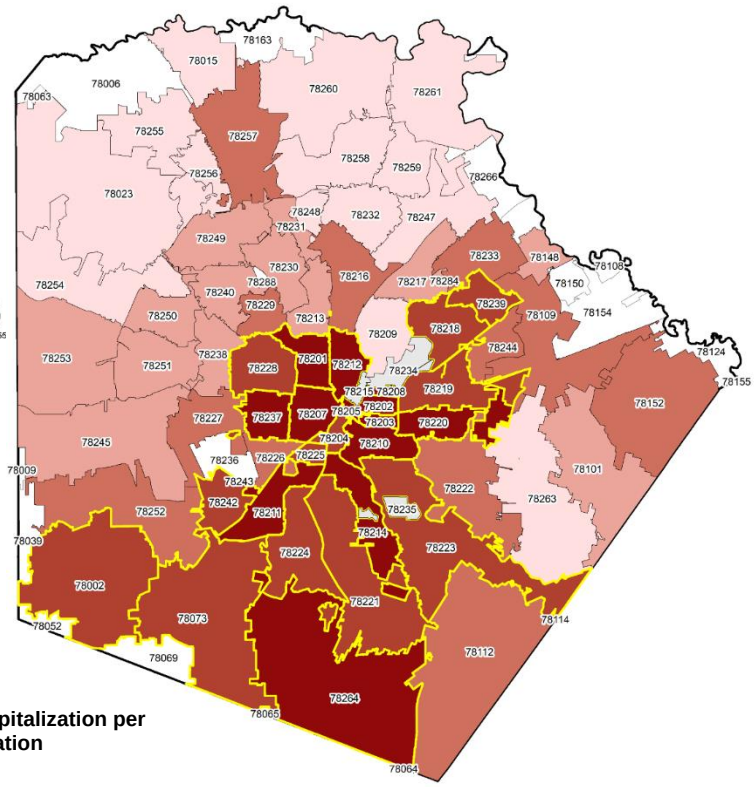
***Note: percentages listed are not mutually exclusive; many cases have multiple underlying conditions.*

When examining percent of cases hospitalized by zip code, those with the highest percentages are also often the zip codes with the highest diabetes hospitalization rates. These zip codes are largely concentrated in central Bexar County. Conversely, the majority of zip codes in northwestern Bexar County have both lower case hospitalization as well as lower diabetes rates. This further indicates the importance of diabetes as a risk factor for COVID-19 severity.



Percent of Bexar County COVID-19 Cases Hospitalized

- 0.0% -4.4%
- 4.5% - 5.3%
- 5.4% - 6.2%
- 6.3 - 7.1%
- 7.2 - 11.0%
- Suppressed due to counts <5
- Zip Codes with Highest Percents of COVID-19 Hospitalization



Diabetes Hospitalization per 10,000 Population

- 4.8 - 11.4
- 11.5 - 21.2
- 21.3 - 27.6
- 27.7 - 35.7
- 35.8 - 81.7
- Suppressed due to counts <5
- Zip Codes with Highest Rates of Diabetes Hospitalization

Source: 2018 Inpatient Hospital Discharge Diabetes Principle Diagnosis ICD-10 Code E08-E14; ACS 2018 5-year estimates, Table S01001

Among pediatric hospitalized cases, 38% are indicated as having some type of underlying condition. Of all the underlying conditions indicated, asthma is the most common (25%), followed by lung disease (15%).

IX. Risk of Hospitalization and Death

Risk of Hospitalization or death due to COVID-19 can vary according to several characteristics, including age, gender and comorbidity status. As expected, risk of hospitalization and death is highest among older age groups. Males also have a moderately higher risk of hospitalization and death compared to females.

Presence of an underlying condition significantly drives up an individual's risk of hospitalization or death. For example, 29% of cases with diabetes have been hospitalized due to COVID-19, while 6% of cases overall have been hospitalized. **Thus, the risk of hospitalization among the subgroup of individuals with diabetes is 5 times higher**.

Risk of death among those hospitalized is 11 times higher than risk of death for all cases overall.

Pregnant COVID-19 cases also appear to have a higher risk of hospitalization: 24% of pregnant cases to date have been hospitalized *(*note: hospitalization data do not differentiate between pregnant women who were admitted for childbirth and happened to receive a COVID-19 test vs. those admitted due to complications from having COVID-19)*

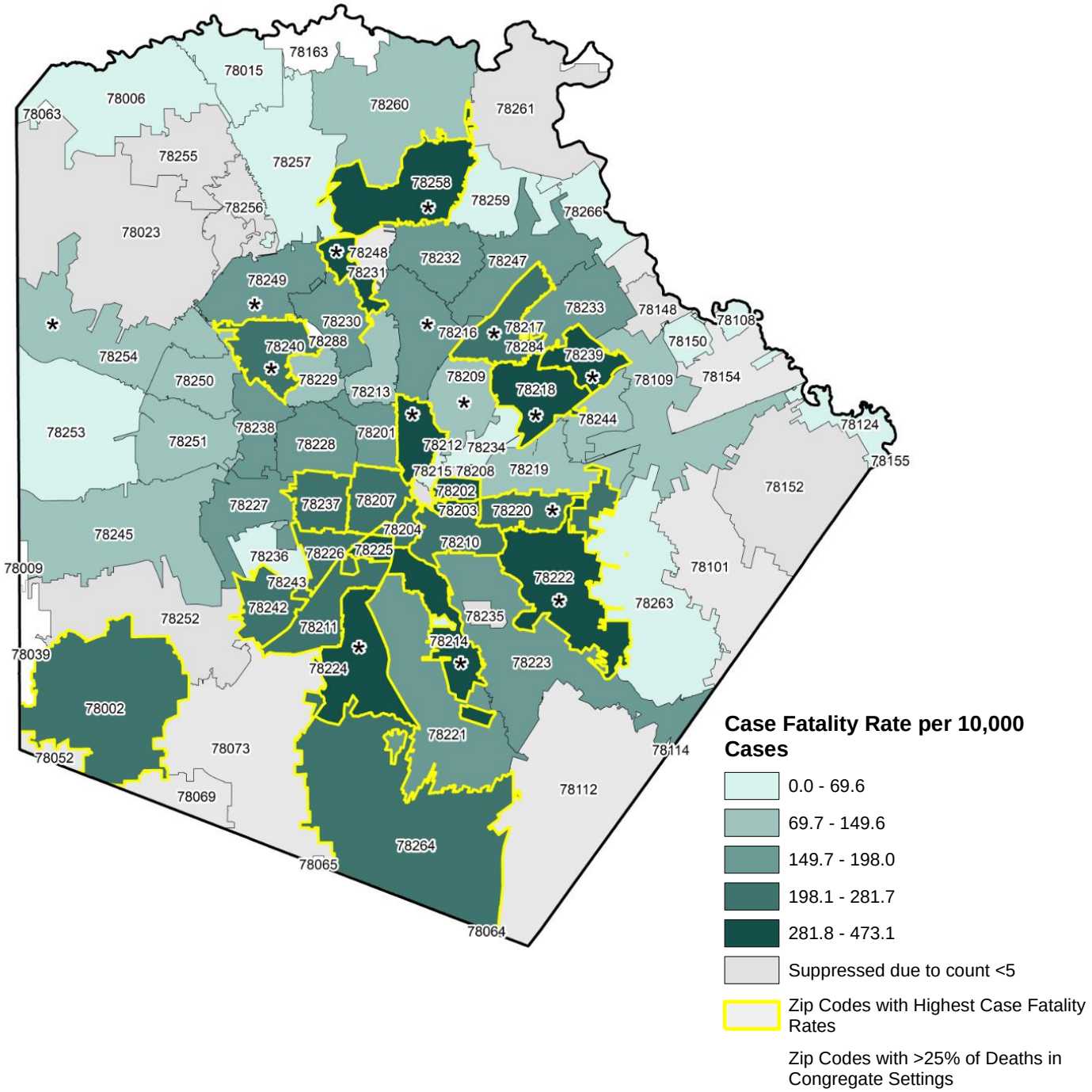
Risk of Hospitalization among COVID-19 Cases

		Total case N available	Total Hospitalized	% of cases Hospitalized
	Total Cases (up to 10/4/2020)	58678	3476	**5.9%**
By age-group	**0-17**	6897	124	**1.8%**
	18-40	26657	689	**2.6%**
	41-64	19149	1465	**7.7%**
	65+	5954	1198	**20.1%**
By gender	**Female**	30412	1646	**5.4%**
	Male	27174	1786	**6.6%**
By underlying condition and pregnancy status	**Any underlying condition**	10717	2466	**23.0%**
	Diabetes as underlying condition	4496	1306	**29.0%**
	Asthma as underlying condition	1880	254	**13.5%**
	Pregnant at time of infection	437	103	**23.6%**

Risk of Death among COVID-19 Cases

		Total case N available	Total Deceased	% of Cases Deceased
	Total Cases (up to 10/4/2020)	58678	1167	**2.0%**
By age-group	**0-17**	6897	3	**0.0%**
	18-40	26657	41	**0.2%**
	41-64	19149	390	**2.0%**
	65+	5954	711	**11.9%**
By gender	**Female**	30412	482	**1.6%**
	Male	27174	650	**2.4%**
By underlying condition and pregnancy status	**Any underlying condition**	10717	801	**7.5%**
	Diabetes as underlying condition	4496	433	**9.6%**
	Asthma as underlying condition	1880	40	**2.1%**
	Pregnant at time of infection	437	1	**0.2%**
	Hospitalized	3476	752	**21.6%**

Risk of death among cases can also be expressed as a rate (i.e. case fatality rate). Similar to patterns in previous maps, the zip codes with the highest case fatality rate are more often clustered in central Bexar County. Several of these zip codes have more than 25% of deaths attributed to a congregate setting (indicated with * on the map).



***Report Authors**: Joshua Guerra (MPH(c)), Valerie Valenzuela (PhD(c)), Joan Cunningham (PhD), Christopher Alonzo (MPH), Maciel Ugalde (PhD), Andrea Valadez (MPH), Maria Buck (MPH), Haley Kitasato (MPH), Golareh Agha (PhD).*